



Title: Sound Absorption Test Results

Product: 2" Poly Max Acoustical Panel (as "Polyester Acoustic Panel")

Application: Wall or Ceiling

Testing Standard: ASTM C423 A-Mount

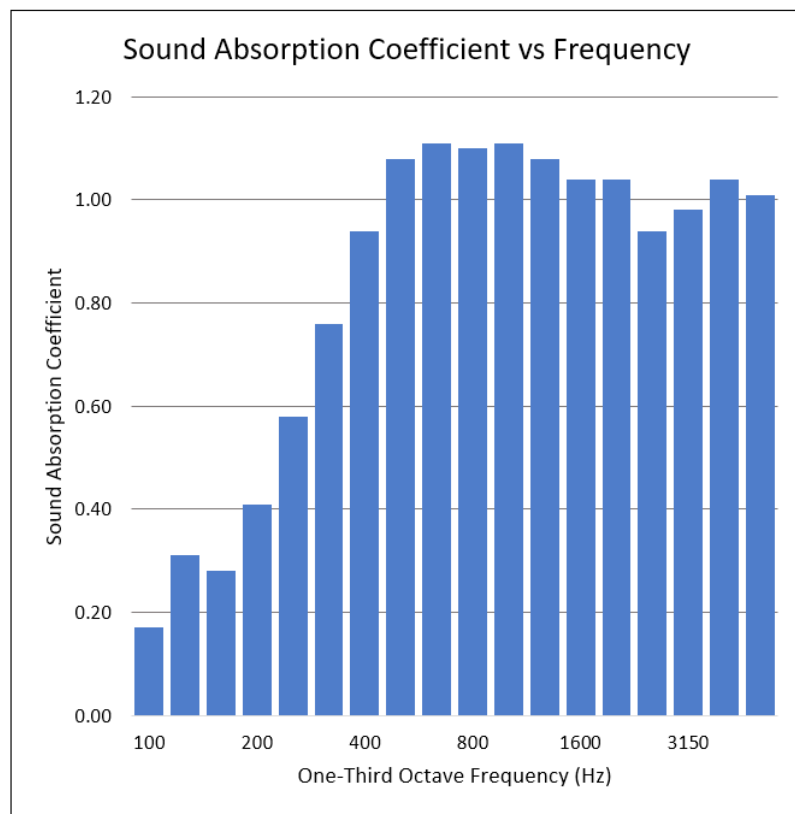
Test Date: 08/03/2012

Why this test: This test evaluates a product's efficiency at absorbing sound at multiple frequencies. The test simulates the product's acoustical performance when directly attached to a wall or ceiling.

Test Result Summary: NRC - 0.95; SAA - 0.93

| | |
|-------------|-------------|
| NRC | SAA |
| 0.95 | 0.93 |

| Frequency (Hz) | Absorption Coefficient |
|----------------|------------------------|
| 80 | 0.07 |
| 100 | 0.17 |
| 125 | 0.31 |
| 160 | 0.28 |
| 200 | 0.41 |
| 250 | 0.58 |
| 315 | 0.76 |
| 400 | 0.94 |
| 500 | 1.08 |
| 630 | 1.11 |
| 800 | 1.10 |
| 1000 | 1.11 |
| 1250 | 1.08 |
| 1600 | 1.04 |
| 2000 | 1.04 |
| 2500 | 0.94 |
| 3150 | 0.98 |
| 4000 | 1.04 |
| 5000 | 1.01 |



Test ID: ESP-10756-1

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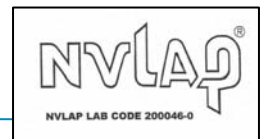
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SOUND ABSORPTION TESTING CONDUCTED Polyester Acoustic Panel

Rendered by Manufacturer
and Released to:
Acoustical Surfaces, Inc.
123 Columbia Court North
Chaska, MN 55318

Date: August 6, 2012
Author: Matt Botz
Report Number: ESP-10756-1



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Noise Reduction Coefficient (ASTM C423-09)

INTRODUCTION:

This report presents the results of acoustical testing of Polyester Acoustic Panel. This testing was requested by manufacturer and was conducted on August 3rd, 2012.

This report must not be reproduced except in full with the approval of Element Materials Technology. The test results contained in this report pertain only to the specific assemblies tested and not necessarily to all similar constructions.

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The results stated in this report represent only the specific construction and acoustical conditions present at the time of the test. Measurements performed in accordance with this standard on nominally identical constructions and acoustical conditions may produce different results.

TEST RESULTS SUMMARY:

| <i>Noise Reduction Coefficient (NRC) Test</i> | | | | Test Results | | |
|---|--------------------------|--------------|--------------|--------------|-------------|----|
| Test # | Sample Identification | Weight (lbs) | Weight (psf) | NRC | SAA | -- |
| 1 | Polyester Acoustic Panel | 57.6 | 0.08 | 0.95 | 0.93 | -- |

Tabular and graphical presentations of the data are presented under "TEST RESULTS" below.

SPECIMEN DESCRIPTION: (Also see "Test Results")

The sample was identified as Polyester Acoustic Panel. The sample was received in 24" x 48" x 2" nominal sections (9 sections received). The exposed area was a total of 72 ft² and weighed 57.6 lbs.



Ear Controlled Data

TEST PROCEDURE AND EQUIPMENT:**Sound Absorption Test**

ASTM C 423-09, "Sound Absorption and Sound Absorption Coefficient by the Reverberation Room Method", was followed in every respect. The sample was tested using Type A Mounting Method.

NRC was calculated by rounding the sound absorption coefficients for 250, 500, 1000 and 2000 Hz to the nearest 0.05. SAA was calculated by rounding the sound absorption coefficients for the twelve frequencies from 200 Hz to 2500 Hz to the nearest 0.01.

TEST EQUIPMENT:

| <u>Manufacturer</u> | <u>Model Description</u> | <u>S/N</u> | |
|---------------------|-------------------------------|--------------|-------------|
| NI-ATS | Sound Measuring System | NI-92374-ATS | TCT102709.2 |
| Norsonic | Rotating Microphone Boom | NOR265 | |
| BSWA (Source Rm) | Pressure Condenser Microphone | MP253 | 450007 |
| GRAS (Term Rm) | Pressure Condenser Microphone | 40AD | 19220-1244 |

Test Data:

SOUND ABSORPTION
ASTM C423

General Information

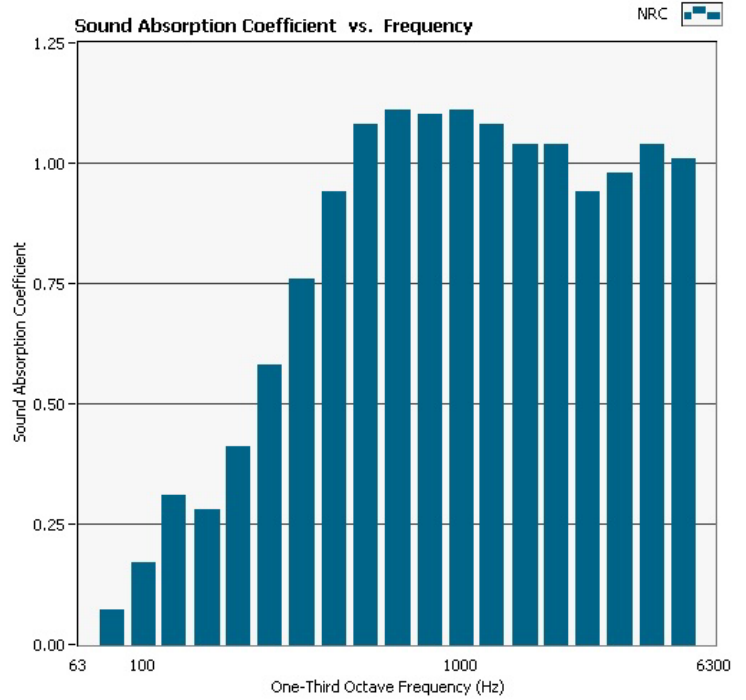
| | |
|-----------------------------|---|
| Project No: | 10756-MFR-1 |
| Customer: | Rendered by Manufacturer and Released to: ASI |
| Test Date: | 08-03-2012 |
| Specimen ID: | Polyester Acoustic Panel |
| Specimen Description: | |
| Specimen Dimensions - Area: | 72.00" W x 144.00" H - 72.00 ft² |
| Operator: | JMW |

Data Table

| | absorption empty (m²) | absorption * sample (m²) | Absorption Coefficient |
|------|-----------------------|--------------------------|------------------------|
| 80 | 4.81 | 0.44 | 0.07 |
| 100 | 5.15 | 1.16 | 0.17 |
| 125 | 2.76 | 2.05 | 0.31 |
| 160 | 2.96 | 1.88 | 0.28 |
| 200 | 3.74 | 2.75 | 0.41 |
| 250 | 3.71 | 3.86 | 0.58 |
| 315 | 3.43 | 5.10 | 0.76 |
| 400 | 3.60 | 6.31 | 0.94 |
| 500 | 3.99 | 7.22 | 1.08 |
| 630 | 4.26 | 7.39 | 1.11 |
| 800 | 4.73 | 7.36 | 1.10 |
| 1000 | 5.03 | 7.40 | 1.11 |
| 1250 | 5.45 | 7.21 | 1.08 |
| 1600 | 6.17 | 6.94 | 1.04 |
| 2000 | 6.97 | 6.97 | 1.04 |
| 2500 | 7.75 | 6.27 | 0.94 |
| 3150 | 8.61 | 6.53 | 0.98 |
| 4000 | 10.25 | 6.97 | 1.04 |
| 5000 | 12.20 | 6.76 | 1.01 |

Room Conditions

| | |
|-------------|---------|
| Temperature | 23.0 °C |
| R.H. | 53 % |
| ATM | 977 hPa |



NRC
0.95

SAA
0.93

* based on an extended plane area of 72.00 ft²